

# **The Virginia Annual Recycling Rate Report**

## **Calendar Year 2006 Summary**

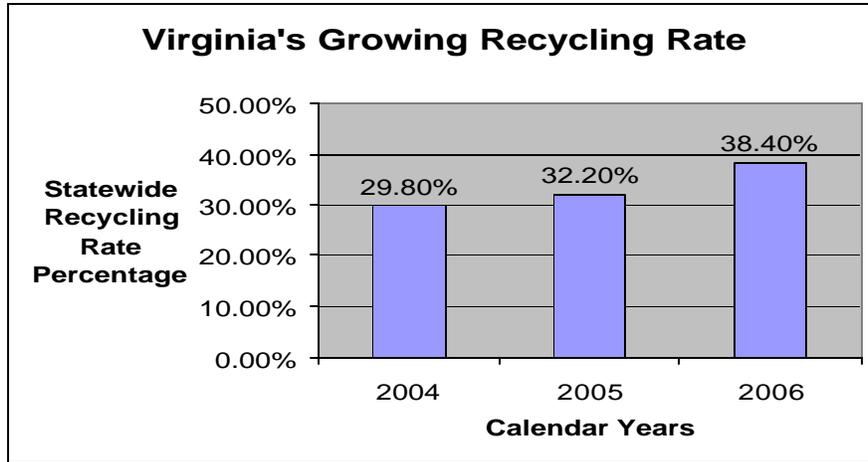


**November 2007**

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## VIRGINIA'S STATEWIDE RECYCLING RATE FOR CALENDAR YEAR 2006

The Virginia Department of Environmental Quality (DEQ) has completed its review of the recycling rate data reported for calendar year (CY) 2006. The data for this summary report was compiled from the reports submitted by the 74 solid waste planning units (SWPUs), and represents recycling information from 325 Virginia cities, counties and towns. In some cases, reported data was adjusted for consistency with the Virginia Solid Waste Planning Regulation (9 VAC 20-130 et. seq.).



### Statewide Recycling Rate Data

**2006 - 3,700,487 tons of material recycled or reused, and 9,706,554 tons of solid waste generated (calculation includes + .3 % for source reduction initiatives)**

**2005 - 2,757,442 tons of material recycled or reused, and 8,554,784 tons of solid waste generated.**

**2004 - 2,688,200 tons of material recycled or reused, and 9,016,087 tons of solid waste generated.**

### Areas Reporting Highest Rates

Most of the higher recycling rates were reported in the more highly populated areas of the state. For CY 2006, these areas reported a total of 3,191,221 recycled tons, or 86 % of all recyclables collected, and had a calculated average recycling rate of 40.8 %. These areas include:

<u>Area</u>	<u>Recycling Rates by Year</u>		
	<u>CY 2006</u>	<u>CY 2005</u>	<u>CY 2004</u>
Bristol Area	37.8 %	39.4 %	40.6 %
Roanoke Area	29.6 %	33.9 %	32.3 %
Lynchburg Area	39.1 %	32.8 %	31.7 %
Northern Shenandoah Valley	28.8 %	26.0 %	29.7 %
Fredericksburg Area	40.4 %	30.6 %	28.8 %
Richmond Area	46.3 %	45.2 %	44.6 %
Northern Virginia	33.4 %	32.0 %	32.8 %
Hampton Roads	50.9 %	36.1 %	29.8 %

### Trends Observed in CY 2006 Reports

In reviewing the statewide totals from the recycling rate reports, the following trends were observed:

- **PRMs Recycled 11 % increase over CY 2005**  
(PRMs = Principal Recyclable Materials such as paper, metals, plastics, etc.)
- **SRMs Recycled 11 % increase over CY 2005**
- **SRMs Reused 172 % increase over CY 2005**  
(SRMs = Supplemental Recyclable Materials such as waste tires, used oil, electronics, construction and demolition debris materials, etc.)
- **MSW disposed 4 % increase over CY 2005**  
(MSW disposed = waste delivered to a sanitary landfill or incinerator for disposal)

As a subset of these categories, the commodity capture rates changed as indicated:

- **Metals 20 % increase over CY 2005**

- Paper 4 % decrease over CY 2005
- Commingled 33 % increase over CY 2005, as would be expected with the growing use of single-stream collections
- Used oil 22 % decrease over CY 2005
- Electronics 280 % increase over CY 2005, as new programs and eCycling vendors expanded collections
- Plastics stable at CY 2005 levels
- Glass 2 % decrease over CY 2005

The statewide recycling rate increased by 6.2 percentage points in CY 2006 over CY 2005. This increase was due in part to the recycling credits authorized for the recycling and reuse of non-MSW materials and source reduction initiatives.

**SWPUs Meeting the Required Rate**

In each of the last four reporting years, more of the reporting entities are meeting the required recycling rate:

<u>Year (% meeting rate)</u>	<u># Reports</u>	<u>25 % or Greater</u>	<u>15% to 25 %</u>	<u># below mandated recycling rate</u>
CY 2003 (35 %)	96	34	n/a	62
CY 2004 (48 %)	95	46	n/a	49
CY 2005 (61 %)	74	45	n/a	29
CY 2006 (86 %)	74	46	18	10

For CY 2006, a two-tiered recycling mandate was in effect as required by the Code of Virginia (<http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+10.1-1411>). Each SWPU was to achieve a minimum 25 % recycling rate *unless* its population density was less than 100 persons per square mile or its civilian unemployment rate was 50 % or more above the state wide unemployment average. SWPUs meeting these criteria were required to achieve a minimum 15 % recycling rate. Using this two-tiered recycling mandate system, 64 of the 74 SWPUs (or 86 %) met or exceeded their minimum mandated recycling rate. As was evidenced in previous years, the SWPUs reporting recycling rates less than 25 % are mostly

lightly populated in makeup, with limited recycling resources and access to markets.

### Solid Waste Management Planning and Recycling Action Plans

DEQ continues to review the required Solid Waste Management Plans (SWMPs) submitted by the SWPUs for completeness, including locality or regional recycling program information. For the plans already reviewed and in which the SWPU has reported less than a 15 % or 25 % recycling rate, DEQ will require a Recycling Action Plan (RAP) to identify specific elements of the recycling program that will be changed or improved in order for the SWPU to reach its recycling rate. The RAP requires both a commitment by the SWPU to provide resources necessary to improve its program, as well as a timeline for achieving the program elements. The RAP must be adopted by the administrative governmental board(s) for all localities covered by the Solid Waste Management Plan, and then approved by DEQ. Regular reporting on the progress made on the RAP elements is required.

#### Recycling Data Concerns

The Technical Advisory Committee (TAC) studying changes in the recycling requirements as a component of the *Regulations for Solid Waste Management Planning* (<http://www.deq.virginia.gov/waste/wastereg130.html>) due to the 2006 legislation requested this clarification be included in the annual report:

*“Due to the complexity and difficulty in obtaining data, this report reflects the best efforts of the planning units to represent recycling in Virginia”*

In addition, the TAC is on record encouraging the reporting of recycling data by all sectors in order to make these numbers as representative of the actual condition as possible:

*“Entities engaged in the collection, processing and marketing of recyclable materials should provide data for incorporation into the recycling rate calculation, when requested by the planning unit”.*

## Calculated Recycling Rates for CY 2006

### Recycling Rates and Data \*

REPORTING ENTITY	CY 2006 Recycling Rate (%)	CY 2006 Total Recycled Tons (PRMs + SRMs + Credits )	CY 2006 Total MSW Generation Tons (PRMs + SRMs + Credits + MSW disposed)
<b>Statewide Totals</b>	<b>38.4 % Statewide</b>	<b>3,700,487</b>	<b>9,706,554</b>
Accomack County SWPU	16.3	7,931	48,546
Alexandria (City) SWPU	24.3	49,344	202,895
Alleghany Highlands SWPU	31 *	8,896	25,703
Amelia County SWPU	24.9	2,572	10,332
Amherst County SWPU	25.2	9,186	36,518
Appomattox County SWPU	29.1 *	2,846	10,491
Arlington County SWPU	42.7 *	104,323	256,570
Augusta –Staunton-Waynesboro SWPU	28.7	42,741	149,087
Bath County SWPU	15.8	960	6,093
Bedford (City) SWPU	37.5 *	6,991	12,353
Bedford County SWPU	37.8 *	25,863	72,311
Botetourt County SWPU	18.5 *	5,763	28,343
Bristol (City) SWPU	37.8	15,814	41,786
Brunswick County SWPU	8.5	1,682	19,787
Buckingham County SWPU	22.1	3,019	13,664
Campbell County SWPU	22.2	15,015	67,710
Caroline County SWPU	38.3	7,583	19,812

<b>REPORTING ENTITY</b>	<b>CY 2006 Recycling Rate (%)</b>	<b>CY 2006 Total Recycled Tons (PRMs + SRMs + Credits )</b>	<b>CY 2006 Total MSW Generation Tons (PRMs + SRMs + Credits + MSW disposed)</b>
Carroll-Grayson-Galax SWPU	19.2	7,794	40,581
Central Virginia Waste Management Authority SWPU (Counties of Charles City, Chesterfield, Goochland, Hanover, Henrico, New Kent, Powhatan, Prince George; Cities of Richmond, Hopewell, Colonial Heights and Petersburg)	46.3	400,323	865,551
Craig County SWPU	26.1	1,021	3,915
Culpeper County SWPU	33.6	14,430	42,917
Cumberland Plateau Regional Waste Management Authority SWPU (Buchanan, Dickenson and Russell Counties)	29.1	23,032	79,157
Danville (City) SWPU	28.1	10,980	39,076
Fairfax (City) SWPU	39.4 *	19,361	49,091
Fairfax County SWPU	35.3 *	497,577	1,496,165
Falls Church (City) SWPU	51.7 *	6,898	13,881
Fauquier County SWPU	25.3	23,268	92,132
Floyd County SWPU	11	1,678	15,260
Franklin County SWPU	30.5	15,257	49,988
Gloucester County SWPU	27.7	13,915	50,163
Greater Rockingham SWPU	25.7 *	11,072	46,708
Harrisonburg (City) SWPU	25.4 *	30,303	75,881
Herndon (Town) SWPU	39.1	10,534	26,953
Highland County SWPU	26.9	624	2,320

REPORTING ENTITY	CY 2006 Recycling Rate (%)	CY 2006 Total Recycled Tons (PRMs + SRMs + Credits)	CY 2006 Total MSW Generation Tons (PRMs + SRMs + Credits + MSW disposed)
King George County SWPU	13.2 *	30,753	47,753
Lee County SWPU	11 *	12,706	30,210
Loudoun County SWPU	30.2	95,141	315,487
Louisa County SWPU	23.8	6,466	27,139
Lunenburg County SWPU	12.2	1,754	14,395
Lynchburg (City) SWPU	46 *	112,007	240,779
Madison County SWPU	10.5	829	7,865
Manassas (City) SWPU	27	11,327	41,923
Manassas Park (City) SWPU	9.9	625	6,322
Martinsville (City)/Henry County SWPU	27.7 *	39,087	113,316
Montgomery Regional Solid Waste Authority SWPU (Montgomery County, Blacksburg and Christiansburg)	27.3	27,785	101,636
Mount Rogers PDC SWPU (Counties of Bland, Smyth, Washington, and Wythe)	28.2	29,337	103,963
Newport News (City) SWPU	45.7 *	214,834	362,782
New River Resource Authority SWPU (Counties of Pulaski and Giles; City of Radford)	26.2	22,589	86,070
Northampton County SWPU	7.6 *	1,775	21,673
Northern Neck PDC SWPU (Counties of Lancaster, Northumberland, Richmond and Westmoreland)	20.2	9,725	48,161
Northern Shenandoah Valley Regional Commission SWPU (Counties of Clarke, Frederick, Shenandoah, Warren and Page; City of Winchester)	28.8	74,568	259,366

REPORTING ENTITY	CY 2006 Recycling Rate (%)	CY 2006 Total Recycled Tons (PRMs + SRMs + Credits)	CY 2006 Total MSW Generation Tons (PRMs + SRMs + Credits + MSW disposed)
Nottoway County SWPU	26.9	7,629	28,335
Orange County SWPU	16.6 *	4,014	21,024
Patrick County SWPU	10.2	967	9,446
Pittsylvania County SWPU	23.9	10,295	43,093
Prince Edward - Cumberland SWPU	15.3	4,352	28,354
Prince William County SWPU	37 *	167,402	478,068
Rappahannock County SWPU	18.1	1,693	9,366
Rappahannock Regional Solid Waste Management Board SWPU (County of Stafford and City of Fredericksburg)	40.4	73,775	182,736
Roanoke (City) SWPU	37.2	29,918	80,459
Roanoke County SWPU	29.3	18,999	64,798
Rockbridge – Lexington – Buena Vista SWPU	24.5	7,744	31,552
Salem (City) SWPU	34	12,291	36,168
Scott County SWPU	19.7	2,942	14,924
Southeastern Public Service Authority SWPU (Counties of Isle of Wight and Southampton; Cities of Chesapeake, Franklin, Norfolk, Portsmouth, Suffolk, and Virginia Beach)	55 *	908,103	1,686,015
Southern Crater Region SWPU (Counties of Dinwiddie, Greensville, Surry, and Sussex; City of Emporia)	18.1	13,285	73,439
Southside Regional PSA SWPU (Counties of Charlotte, Halifax and Mecklenburg)	17.4	19,216	110,649
Spotsylvania County SWPU	31.3	39,862	127,305

REPORTING ENTITY	CY 2006 Recycling Rate (%)	CY 2006 Total Recycled Tons (PRMs + SRMs + Credits)	CY 2006 Total MSW Generation Tons (PRMs + SRMs + Credits + MSW disposed)
Tazewell County SWPU	26.2 *	23,189	77,808
Thomas Jefferson PDC SWPU (Counties of Albemarle, Fluvanna, Greene and Nelson; City of Charlottesville)	34.3 *	78,005	241,413
Vienna (Town) SWPU	55.1	6,651	12,078
Vinton (Town) SWPU	35.7	2,316	6,493
Virginia Peninsulas Public Service Authority SWPU (Counties of Essex, James City, King & Queen, Mathews, Middlesex, and York; Cities of Hampton, Poquoson, and Williamsburg)	34.5 *	159,703	446,662
Wise County SWPU	32.7	18,235	55,792
<b>STATEWIDE TOTALS CY 2006</b>	<b>38.4 %</b>	<b>3,700,487 Tons</b>	<b>9,706,554 Tons</b>

\* All data based on adjustments by DEQ for consistency with 9VAC-20-130-10 and 9VAC20-130-120, with a 5 % maximum percentage allowed for credits to the base recycling rate calculated by a solid waste planning unit. A 2% source reduction credit may be added to the calculated recycling rate for a documented source reduction program.

**PRMs = Principal Recyclable Materials**

**SRMs = Supplemental Recyclable Materials**

**Credits = Recycling Residues, Solid Waste Reused, Non-MSW Recycled, Source Reduction**

**MSW Disposed = Municipal solid waste delivered to sanitary landfills or incinerators for disposal.**

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## Recycling Rate Report Summary

### Virginia Localities Reporting Rate Information for CY 2006

**74 Recycling Rate Reports**, representing **325 Virginia localities** and every **Solid Waste Planning Unit** were received. This represents a return rate of 100 %. Totals for all reports are presented below:

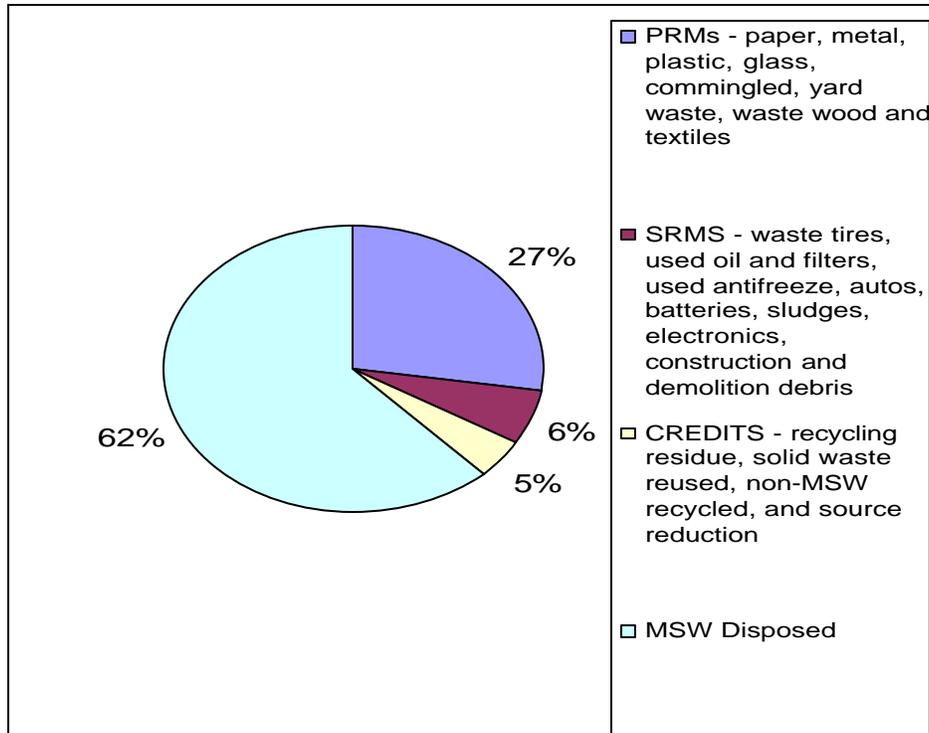
Principal Recyclable Material (PRM)		Supplemental Recyclable Material (SRM)				Total MSW Disposed	
		Recycled SRM		Reused SRM			
Paper	922,024	Waste Tires	70,210	Const. Waste	46,265	Household Waste	4,259,862
Metal	704,127	Used Oil	51,281	Demol. Waste	37,430	Commercial Waste	1,613,349
Plastic	30,159	Used Oil Filters	1,980	Debris Waste	39,059	Institutional Waste	70,940
Glass	39,278	Used Antifreeze	2,633	Ash	218,833	Other:	61,915
Commingled	112,413	Auto Bodies	9,127	Other:	1,244		
Yard Waste	563,968	Batteries	18,825				
Waste Wood	243,076	Sludge (Composted)	22,721				
Textiles	42,817	Electronics	7,820				
		Tree Stumps (>6" Diameter)	53,089			<b>TOTAL MSW (M) (Tons)</b>	<b>6,006,067</b>
<b>Total PRM (P) (Tons)</b>	<b>2,657,862</b>	Other:	21,227			<b>TOTAL SRM (S) (Tons)</b>	<b>601,744</b>
		<b>Recycled SRM (Tons)</b>	<b>258,914</b>	<b>Reused SRM (Tons)</b>	<b>342,830</b>		
		<b>CREDITS</b>					
		Recycling Residue	11,648				
		Solid Waste Reused	390,483				
		Non-MSW Recycled	38,750			<b>State Recycling Rate:</b>	
		<b>TOTAL CREDITS (C) (Tons)</b>	<b>440,881</b>			$(P+S+C)/(P+S+C+M) \times 100$ $(3,700,487/9,706,554) \times 100 + .3\%$	<b>38.4 %</b>
		<b>2 % Source Reduction Credit</b>	18 entities, equaling .3% overall				

\* All data based on adjustments by DEQ for consistency with 9VAC-20-130-10 and 9VAC20-130-120.

# RECYCLING IN VIRGINIA, CY 2006

## Statewide Recycling Rate of 38.4 %

### MSW Management – Recycling and Disposal



**PRMs = Principal Recyclable Materials**

**SRMs = Supplemental Recyclable Materials**

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**MSW Disposed = Municipal solid waste delivered to sanitary landfills or incinerators for disposal.**